TRIMMAN, S. . and FAYETT, Ye. L.

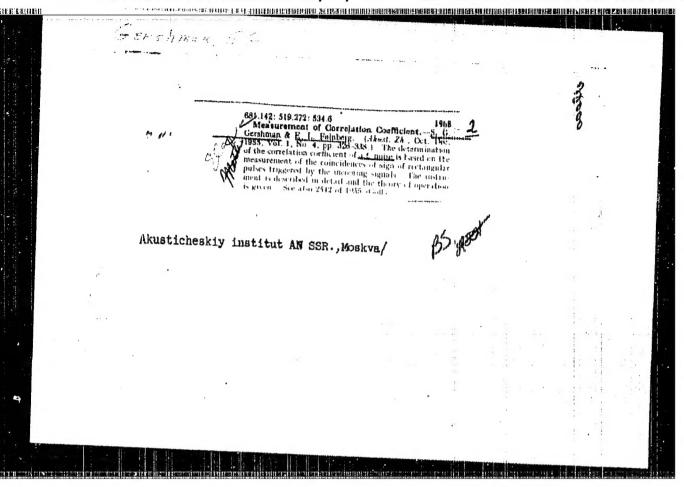
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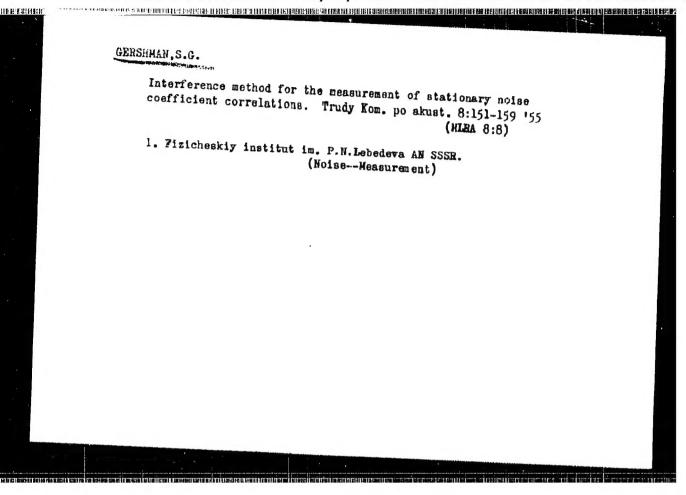
"A device for measuring the Deefficient of Gerrelation of Ptationary Moises".

Acoustic Institute, and Husics Institute imeni I. N. Lebedav; both of the

A rejort delivered at a conference on glectro-acoustics held by the Acoustic Commission, the Acoustic Institute of the Acade y of Sciences, USSR, and the Riev Order of L min Folyteconic Inst., from 1-5 only 1951 in Kiev.

30: Jum 727, 2- nov 1955.





GERSLMAN, S.G.

46-3-11/15

AUTHORS: Gershman, S.G. and Orlov, Ye. F.

TITLE: A Correlational Method of Measuring the Acoustic Ratio.
(Korrelyatsionnyy metod izmereniya akusticheskogo otnosheni-

PERIODICAL: Akusticheskiy Zhurnal, 1957, Vol.III, Nr 3, pp.285-288

ABSTRACT: In considering certain acoustic problems of architecture of enclosed spaces, the concept of acoustic ratio is used (Ref.1). The present note describes a method of direct measurement of this ratio in an enclosed space and a number of in a closed space a linear sound transmitting channel is working, emitting a sonic signal x(t). Using the prinaprocess y(t) received at some point within this enclosed space is described by the expression:

 $y(t) = \int_{0}^{\infty} x(t - \theta) f(\theta) d\theta$  (1)

where f(0) is the response of the system to a  $\delta\text{-impulse}$  . Card 1/4  $^{\rm It}$  may be shown that the coefficient of mutual correlation

46-3-11/15

A Correlational Method of Measuring the Acoustic Ratio.

 $R_{xy}$  between the received sound y(t) and the emitted sound delayed for a time  $\tau$  by the process  $x(t-\tau)$  is given by:

$$R_{xy} = \frac{\sigma_x}{\sigma_y} \int_0^\infty R_{xx}(\tau - \theta) f(\theta) d\theta$$
 (2)

where  $\sigma_{X}$  and  $\sigma_{y}$  are the effective values of the emitted and received processes respectively and  $R_{\chi\chi}$  is the coefficient of autocorrelation of the process  $\chi(t)$ . Eq.(2) gives the relation between the coefficient of mutual correlation, the autocorrelation function of the emitted signal and the response of the sonic transmission system to a single impulse. From these expressions it is shown that:

Card 2/4

 $R_{xy} = \frac{\sigma_i}{\sigma_y}$  with  $\tau = \frac{r_i}{c}$  where  $\frac{r_i}{c}$  is the time

46-3-11/15

A Correlational Method of Measuring the Acoustic Ratio.

taken by the i<sup>th</sup> wave and  $\sigma_i = \alpha_i \sigma_x$  where  $\alpha_i$  are coefficients taking into account the divergence of waves in space and their absorption on the reflections. Thus, Rxy turns out to be a direct measure of the acoustic ratio. rimental part of this work was carried out using the appa-The experatus shown in Fig.1. The apparatus consisted of a correlation meter, 1 (cf.Ref.2) in series with a delay device, 2, and a noise meter, 3. To the radiator, 4, a noise signal, x(t) was applied. The position of the radiator was kept fixed. The receiver, 5, could be placed at 7 different points along the axis of the emitter. At each of these points  $R_{\chi y}( au)$  was measured as well as the level of total sound in the enclosed space, i.e., 20 lg  $\sigma_y$  . The results of measurements are summarised in 3 figures. The following persons collaborated: E.L.Feynberg, V.S.Grigor'yev, N.S. Antonov and V.M.Shatalov. There are 3 figures, no tables and 3 references of which 2 are Russian and 1 English.

Card 3/4

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46-3-11/15

A Correlational Method of Measuring the Acoustic Ratio.

ASSOCIATION: Institute of Acoustics of the Academy of Sciences, USSR, Moscow (Akusticheskiy institut AN SSSR, Moskva)

SUBMITTED: May 14, 1957.

AVAILABLE: Library of Congress.

Card 4/4

CIA-RDP86-00513R000514920007-3" APPROVED FOR RELEASE: 09/24/2001

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69000

9/046/60/006/003/002/012 B006/B063

AUTHORS:

Gershman, S. G., Tuzhilkin, Yu. I.

TITLE:

Measurement of the Coefficient of Transverse Correlation of a Continuous Sound Signal in the Sea

PERIODICAL:

Akusticheskiy zhurnal, 1960, Vol. 6, No. 3, pp. 292-298

TEXT: The authors first discuss the causes and shape of fluctuations exhibited by a sound signal propagating in the sea. It was the purpose of the present paper to carry out an approximate determination of the fluctuations of a continuous sound signal of the frequency 7.5 ± 0.2 kc/sec on the basis of measurements of the transverse correlation. The method used is based on the assumption that a noise signal emitted by an emitter in O be received in A and B. The authors first give a simple theory of this method, proceeding from the simplifying assumption that the signal f(t)emitted from 0 reaches each of the receivers only in two ways. The experimental arrangement is schematically shown in Fig. 2. Figs. 3 and 4 give the recorded values of the coefficients of transverse correlation. Both diagrams show a section where the correlation coefficient exceeds the

Card 1/3

Measurement of the Coefficient of Transverse 82726 Correlation of a Continuous Sound Signal in the \$/046/60/006/003/002/012 B006, B063

fluctuation level considerably. A similar result is obtained from singlebeam experiments as well as from many-beam experiments with similar times of propagation (  $\Delta\tau<10^{-3}$  sec). The diagram shown in Fig. 3 was obtained at r = 3700 m and d = 200 m; the signal was 4.5 times stronger than the intensity of the maritime noise. Fig. 4 was obtained at r = 9 km and d = = 3 km. The signal-to-maritime noise ratio was nearly 2. Fig. 5 shows a complicated diagram obtained from a double-beam experiment. One beam reached the receiver without being reflected, whereas the other one was reflected twice (on the surface of the sea and on the bottom). The evaluation of the oscillogramsis illustrated in Figs. 6 and 7. Fig. 6 shows the maximum values of the correlation coefficients, R, as functions of d, and Fig. 7 illustrates R(r). Summing up: At a distance of  $r \leq 12$  km between source and wave front and at a distance of d \( \lambda \) km between the receivers at the wave front, the correlation coefficients are nearly equal to unity, irrespective of r and d. The quick response of the instrument (0.1 sec) makes it possible to observe fluctuations of the coefficient of the correlation between a signal reflected from the surface and an unreflected

Card 2/3

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Measurement of the Coefficient of Transverse Correlation of a Continuous Sound Signal in the

82726 S/046/60/006/003/002/012 B006/B063

signal. The coefficient of correlation between two signals that up no reach the surface fluctuates only slightly. The authors thank V. S. Grigor as well as N. S. Antonov and S. D. Pankova yev for his valuable advice, as well as N. S. Antonov and S. D. Pankova for their assistance in measurements. L. A. Chernov is also mentioned. There are 7 figures and 11 references: 6 Soviet and 5 US,

ASSOCIATION:

Akusticheskiy institut AN SSSR Moskva

(Institute of Acoustics of the AS USSR, Moscow)

SUBMITTED:

May 19, 1960

Card 3/3

6.8000 (1031,1063,1159)

300116 S/046/61/007/004/001/014 B139/B102

AUTHORS:

Gershman, S. G., Smirnov, A. I., Tuzhilkin, Yu. I.

TITLE:

Converter for obtaining the correlation function of

infrasonic processes

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 4, 1961, 415-420

TEXT: A device is described for the conversion of infrasonic signals to the frequency range of the sound correlometer. The traditional modulation method with filtering out one side band cannot be applied since the side bands in the infrasonic range are too close to one another. In the device described both side bands of the amplitude-modulated spectrum are used and filtering is not applied. Signals with spectra from a frequency of 0 cps onward are converted. The device consists of a heterodyne (1) of the frequency 7 5 kc/sec and two analogous channels, each with an input amplifier (2), a phase-difference modulator (5), a filter (6900 - 3100 aps)(4), and an output amplifier (5)

Card :/3

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Converter for obtaining the correlation ... 30cht \$\ \$\/046/61/007/004/001/014\$

I in 
$$a-2-3-4-5$$
 out I

II in 0-2-3-4-5-0 out II

The input pass band of the converter is 0-500 cps. Since the correlation function of the signals is considered to be the time average of their products at different points of time, the relation between the correlation function of output signals  $B_{\rm T}(T)$  and the searched-for correlation function B(T) is expressed by

$$B_{T}(\tilde{t}) = f(t)\cos w_{0}t \, g(t+\tilde{t})\cos w_{0}(t+\tilde{t}) = \frac{1}{2}B(\tilde{t})\cos w_{0}t \quad (1)$$
The device constant

The device can be used with any type of correlometer. Reliable devices based upon this principle have been developed by G. M. Darskiy, N. A. Vasil'yev, and V. S. Popov, engineers of the Akusticheskiy instituted and 2/3

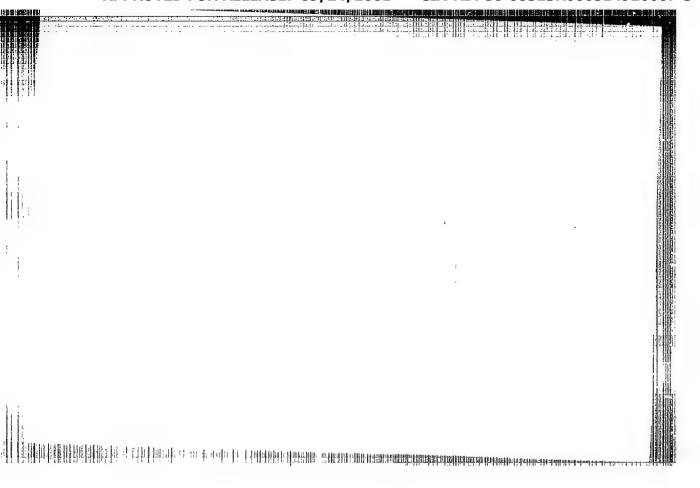
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AN SSSR (Accustics Institute AS USSR). A considerable advantage of the heterodyne converter is the possibility of converting signals with a constant component. In connection with this converter, the correlemeter becomes a universal device for determining the correlation of signals from lowest infrasonic to highest ultrasonic frequencies. There are 8 figures and 3 Soviet references.

ASSOCIATION: Akusticheskiy institut AN SSSR Moskva (Acoustics Institute AS USSR, Mcscow)

SUBMITTED: May 20, 196:

Card 3/3



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AGALINA, M.S., inzh.; AKUTIN, T.K., inzh.; APRESOV, A.M., inzh.; ARISTOV, S.S., kand. bkhn. nauk,; BELOSTOTSKIY, O.B., inzn.; BEELIE, A.Ye.,inzn.; BESSKIY, K.A., inzh.; BLYUM, A.M., inzh.; BRAUM, I.V., inzh.; BRODSKIY, I.A., inzh.; BURAKAS, A.I., inzh.; VAYNMAN, I.Z., inzh.; VARSHAVSKIY, I.W., inzh.; VASIL'YEVA, A.A., inzh.; VORONIN, S.A., inzh.; VOYTSEKHOVSKIY, L.K., inzh.; VRUBLEVSKIY, A.A., inzh.; GERSHMAN, S.G., inzh.; GOLUBYATNIKOV, G.A., inzh.; GOHLIN, M.Yu., inzh.; GRAMMATIKOV, A.N., inzh.; DASHEVSKIY, A.P., inzh.; DIDKOVSKIY, I.L., inzh.; DOBROVOL'SKIY, N.L., inzh.; DROZDOV, P.F., kand. tekhn. muk.; KOZLOVSKIY, A.A., inzh.; KIRILEHKO, V.G., inzh.; KOPELYANSKIY, G.D., kand, tekhn. nauk,; KORETSKIY, M.M., inzh.; KUKHARCHUK, I.N., inzh.; KUCHER, M.G., inzh.; MERZLYAK, M.V., inzh.; MIRONOV, V.V., inzh.; NOVITSKIY, G.V., inzh.; PADUN, H.M., inzh.; PANKRAT YEV, K.B., inzh.; PARKHOMENKO, V.I., kand. biol. nauk.; PINSKIY. Ye.A., inzh.; POLLUBNYY, S.A., inzh.; PORAZHENKO, F.F., inzh.; PUZANOV. I.G., inzh.; REDIN, I.P. inzh.; HEZNIK, I.S., kand. tekhn. nauk,; ROGOVSKIY, L.V., inzh.; RUDERMAN, A.G., inzh.; RYBAL'SKIY, V.I., inzh.; SADOVNIKOV, I.S., inzh.; SEVER' YANOV, N.N., kand. tekhn. nauk,; SEMESHKO. A.T., inzh.; SIMKIK, A.Kh., inzh.: SURDUTOVICH, I.N., inzh.: TROFIMOV. V.I., inzh.; FEFER, M.M., inzh.; FIALKOVSKIY, A.M., inzh.; FRISHMAN, M.S., inzh.; CHERESHNEV, V.A., inzh.; SHESTOV, B.S., inzh.; SHIYMAN, M.I., inzh.; SHUMYATSKIY, A.F., inzh.; SHCHERBAKOV, V.I., inzh.; STANCHENKO, I.K., otv. red.: LISHIN, G.L. inzh., red.: KRAVTSOV, Ye.P., inzh., red.; GRIGOR'YEV, G.V., red.; KAMINSKIY, D.N., red.; KRASOVSKIY, I.P., red.; LEYTMAN, L.Z., red.[deceased],; GUREVICH, M.S., insh., red.; DANILEVSKIY, A.S., inzh., red.; DEMIN, A.M., inzh., red.; KAGANOV. S.I., inzh., red.; KAUFMAN, B.N., kand. tekhn. nguk, red: LISTOPADOV, N.P., inzh., red.; MENDELEVICH, I.H., inzh., red. [deceased]; continued on next card)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000514920007-3"

AGALINA, M.S.... (continued) Card 2.

PENTKOVSKIY, N.I., inzh., red.; ROZEHBERG, B.M., inzh., red.; SLAVIN, D.S., inzh., red.; FEDOROV. M.P., inzh., red.; TSYMBAL, A.V., inzh., red.; SMIRNOV, L.V., red. izd-va.; PROZONOVSKIYA, V.L., tekhn. red.

[Mining; an encyclopedic handbook] Gornoe delo; entsiklopedicheskii spravochnik. Moskve. Gos. nauchne-tekhn. isd-vo lit-ry po ugol'noi' promyshl. Vol. J.[Organization of planning; Construction of surface buildings and structures] Organizatis proektirovania; Stroitel'stve zdanii i sooruzhenii na poverkhnosti shakht. 1958. 497 p. (HIRA 11:12) (Mining engineering)

(Building)

(A, N)

21/09.3/00,000/01//0101/0102

INVENTOR: Vasil'yev, N. A.: Gershman, S. G.

ORG: none

TITLE: Discrete correlometer. Class 42, No. 186764

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 101

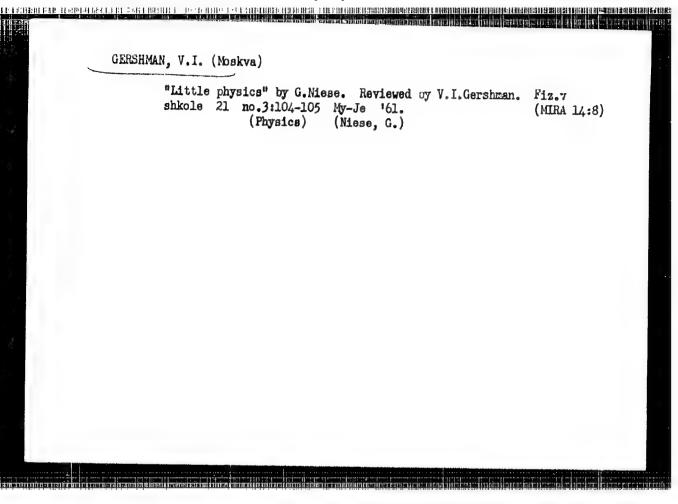
TOPIC TAGS: data correlation, correlation function, magnetic memory

ABSTRACT: This Author Certificate describes a discrete correlometer, comprising an input transducer, a tape transport, magnetic memories, speed-stabilized drive, and an arithmetic unit which has an improved delay stability over extended time intervals. The improvement was achieved by coupling signals from the memories to the arithmetic unit together with an amplified highly stable signal from a time delay oscillator. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 10Aug65/

Card 1/1

UDC: 681.14-523.8



DOEROVOL'SKIY, D.M.; LYAL'KIN, M.A. (g. Petrovka Gor'kovakoy oblasti);

BOBERSKIY, A.A. (at, Kok-Su Alma-Atinakoy oblasti, Kazakhskoy SSR); MIKHAYLOV, A.V.; LARICHKIN, M.Ye.; GERSHMIN, V.I.;

SMOLOV, Ye.I. (Sevastopol\*)

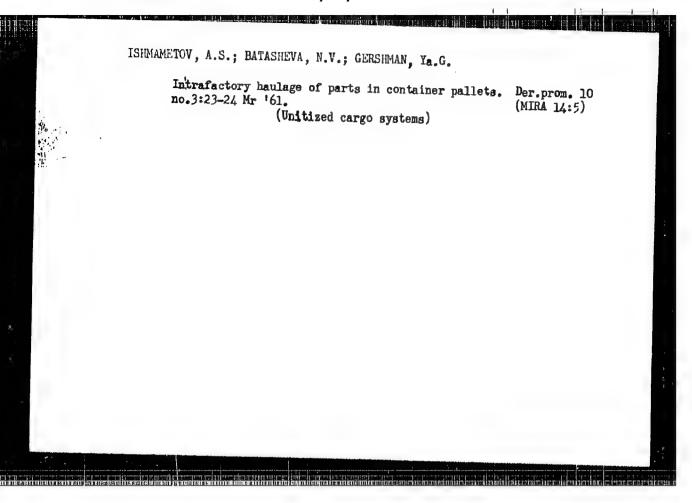
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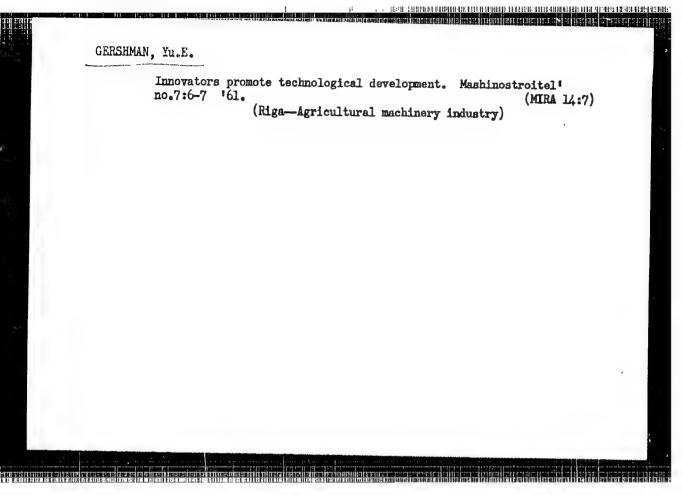
(MIRA 16:2)

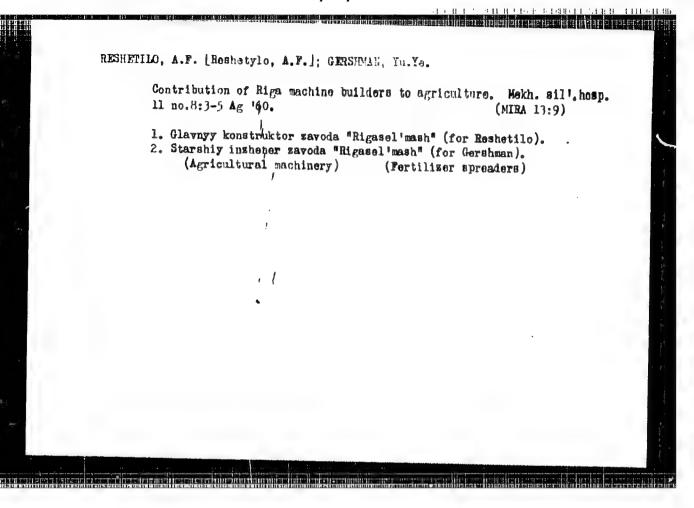
1. 3-ya vos\*miletnyaya shkola, g.Serdol\*sk, Penzenskoy oblasti (for Dobrovol\*skiy). 2. Srednjaya shkola, g.Undino-Bosel\*ye Chitinskoy oblasti (for Mikhaylov, A.V.). 3. Shemshinskaya srednyaya shkola Tatarskoy ASSR (for Larichkin). 4. 56-ya vechernyaya shkola Moskva (for Gershman).

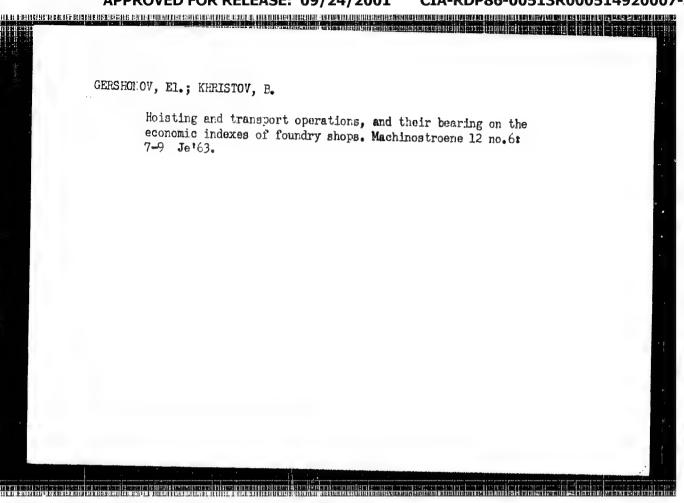
(Physics-Textbooks)

MIKHAYLOV, A.V.; GERSHMAN, V.M.; BRAVERMAN, E.M. (Moskva) Criticism and bibliography. Fiz. v shkole 23 no.3:104-109 My-Je 163. (MIRA 16:12) 1. Undino-Posel'skaya srednaya shkola Chitinskoy oblasti (for Mikhaylov). 2. 56-ya shkola rabochey molodezhi, Moskva (for Gershman).



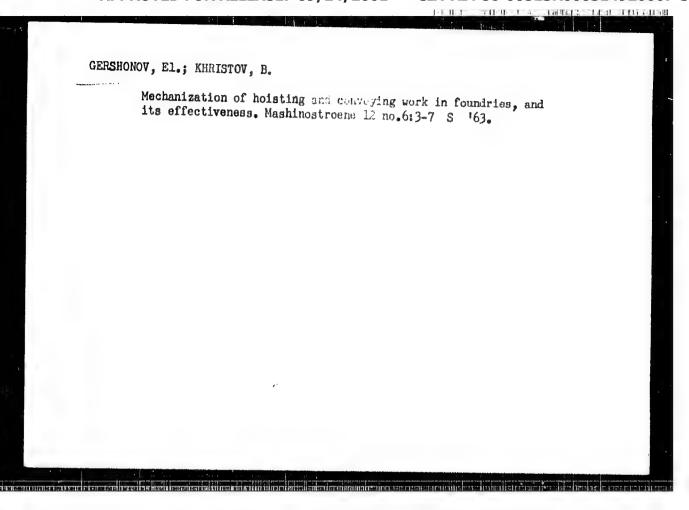




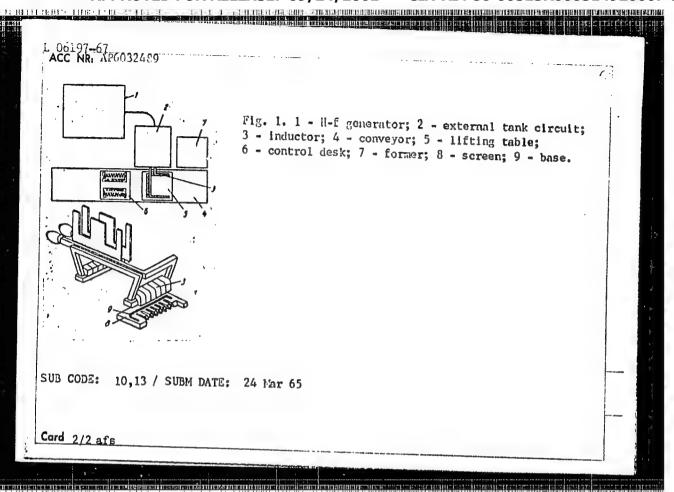


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THUENDOD	FSS-2/ENT(1)/EMP(v)/EMP(1)/ETI/THP(k) DS/JD/HM 032489 SOURCE CODE: UR/0413/66/000/017/0030/0030
Yegorov, B. A. Parshin, N. A.	ekseyev, F. A.; Balashov, V. A.; Gershonok, M. L.; Grachev, I. M.;; Kobyl'nitskaya, M. I.; Kozlov, D. A.; Lifshits, A. I.; Mondrus, D. B.;; Rashevskiy, A. L.; Rivkin, A. E.; Tal'gren, A. A.; Khansuvarov, A. A.
ORG: none	6
TITLE: Devic	e for high frequency soldering of lead-acid storage batteries. Class 21,
	reteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 30 E
on external ta conveyor with equipped with	Author Certificate has been issued for a device for high-frequency lead-acid storage batteries. The device contains an h-f generator with nk circuit, a multiloop inductor with open ferrite magnetic circuits, a a lifting table, a control desk, and an assembling-soldering former a magnetic screen fastened on a non-magnetic base. Orig. art. has:
figure.	
ligure,	



S/226/62/000/005/006/007 E193/E383

AUTHOR:

Gershov, I.Yu.

TITLE:

Barium-ferrite magnets

PERIODICAL:

Poroshkovaya metallurgiya, no. 5 . 1962, 99-108

, 1962, 99-108 TEXT: The object of the present investigation was to establish a method of preparation of barium-ferrite permanent magnets that would ensure the optimum combination of magnetic properties of the finished product. The first stage of the process studied consisted of grinding a mixture of technical (preliminarily roasted) iron oxide and barium nitrate mixed in the proportion corresponding to the formula Ba0.6Fe $_2$ 0 $_3$ , roasting the mixture to convert it to barium ferrite and grinding the resultant product. To obtain barium-ferrite powder for the fabrication of isotropic magnets, the iron oxide/barium nitrate mixture was roasted for 5 hours at 900 -950 °C, after which the powder, mixed with 1% kaolin, was ground to obtain a product containing less than 0.2% of the +200 and +250 mesh fractions. After adding the binder (8 wt.% of an aqueous solution of 8% polyvinyl alcohol), the mixture was compacted under a pressure of 1.5 - 2 t/cm and the compact sintered

Barium-ferrite magnets

S/226/62/000/005/006/007 E193/E383

for 2 hours at 1 160 - 1 260  $^{\rm o}$ C, the sintering shrinkage amounting to 13  $\pm$  2%. The iron oxide/barium nitrate mixture is roasted for 5 hours at 1 150 - 1 500 °C during the preparation of anisotropic magnets and the product is mixed with 1% kaolin and ground dry in a vibratory mill, after which a suspension of this mixture in water, acetone or alcohol is prepared by ball-milling. The suspension, containing 30 - 34% of the liquid phase, is placed in a die and magnetized, after which the liquid is filtered-off and the powder is compacted (in the magnetic field) under a pressure of  $100-200~{\rm kg/cm}^2$ . The compacts are dried for 24 hours and then sintered for 2 hours at  $1.180-1.280~{\rm C}$ , the sintering shrinkage amounting to  $32 \pm 2\%$  in the preferential and  $18 \pm 2\%$  in other directions (both the roasting and sintering operations are carried out in air). The present author studied the effect of the following factors: BaO content (13.65 - 15.9%); kaolin content (1-3%); temperature of roasting the iron oxide/barium oxide mixture (800 -1 200 °C); duration of the wet ball-milling of the barium ferrite/kaolin/liquid mixture (12 - 144 hours); the magnitude of the magnetic field before and during compacting (1 540 - 16700Card 2/4

Barium-ferrite magnets

S/226/62/000/005/006/007 E193/E383

and 2 990 - 19 000 0e, respectively). As a result, the following optimum conditions were established for the preparation of isotropic magnets: a) BaO content - 15 ± 1%; b) kaolin content - 1%; c) 5 hours roasting of the iron oxide/barium nitrate mixture at 900 - 950 °C; d) compacting under a pressure of 1.5 - 2 t/cm; e) sintering for 2 hours at 1 160 - 1 260 °C. Magnets prepared to this specification have the following properties:  $B_r = 1\ 900 - 2\ 200\ gauss;$   $B_r^HC = 1\ 600 - 1\ 850\ 0e;$   $I_r^HC = 2\ 800$  - 3 500 0e; (B X H) = 0.8 x 10 - 1.0 x 10 gauss.0e. Regarding the anisotropic magnets, it was established that two types of products, characterized by the following properties, could be made: Group I -  $B_r = 3\ 300 - 3\ 700\ gauss;$   $B_r^HC = 3\ 400 - 2\ 500\ 0e;$  (B X H) = 2.5 x 10 - 3.0 x 10 gauss.0e; Group II -  $B_r = 3\ 500 - 4\ 000\ gauss;$   $B_r^HC = 2\ 500 - 1\ 600\ 0e;$   $I_r^HC = 2\ 600 - 1\ 700\ 0e;$  (B X H) = 2.8 x  $I_r^0 = 3.5\ x 10\ gauss.0e;$  The method of preparation of the first group entails 5 hours roasting of the iron oxide/barium nitrate mixture at 1 150 °C and Card 3/4

Barium-ferrite magnets . S/226/62/000/005/006/007 E193/E383

2 hours sintering at 1 220 - 1 260 °C or roasting at 1 200 °C and sintering at 1 180 - 1 220 °C. The method recommended for making materials of the second type entails 5 hours roasting at 1 200 - 1 300 °C and 2 hours sintering at 1 240 - 1 280 °C or roasting at 1 300 °C and sintering at 1 220 - 1 260 °C. There are 6 figures and 5 tables.

ASSOCIATION:

NITavtopriborov

SUBMITTED:

January 15, 1962

Card 4/4

#### CIA-RDP86-00513R000514920007-3 "APPROVED FOR RELEASE: 09/24/2001

EPF(n)=2/EMP(q)/EMT(n)/BDS/T=2/ES(0)42 AFFTC/ASD/SSD Ptol WH/JD ACCESSION NR: AP3001955 5/0226/63/000/003/0071/0080

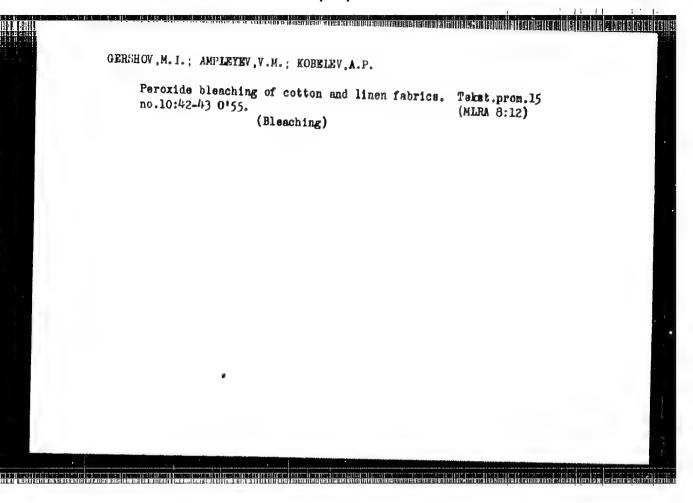
AUTHOR: Gershov, I. Yu.

TITLE: Properties and use of ceramic magnets of barium ferrite

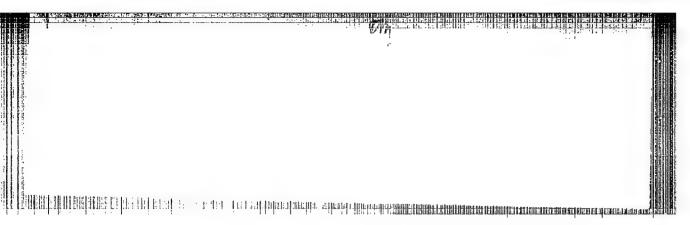
SOURCE: Poroshkovaya metallurgiya, no. 3, 1963, 71-80-7

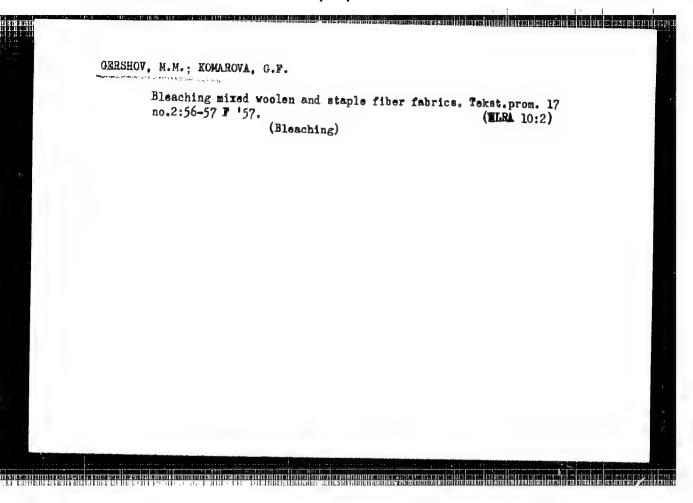
TOPIC TAGS: ceramic magnet, barium ferrite

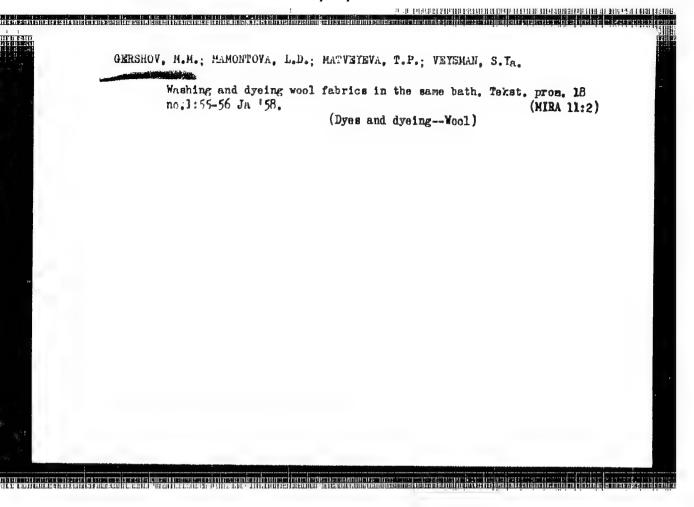
ABSTRACT: The possibility of ceramic barium ferrite magnets replacing metallic permanent magnets was investigated by the author, who had previously described the technique of producing ceramic magnets ("Poroshkovaya metallurgiya", No 5, 100, 1962). In the present experiments the magnetic induction as well as the aging and its relation to the coercive force of ceramic magnets were studied at temperatures ranging from -77 to +400C. It was determined that the best shape for a ceramic magnet is a disk with a ratio of 1:2 between its thickness and diameter. For a metallic magnet the ideal shape is a bar with the ratio between its length and diameter ranging from 2.5 to 5. The strength and toughness of organic magnets were lower as compared with similar metallic magnets. It is concluded that under some conditions ceramic magnets may replace metallic ones if all the properties of the former are carefully considered. Ceramic magnets will have to be different in shape and design, but they will prove economical by saving nickel, aluminum, Association: NIIAvtopriborov

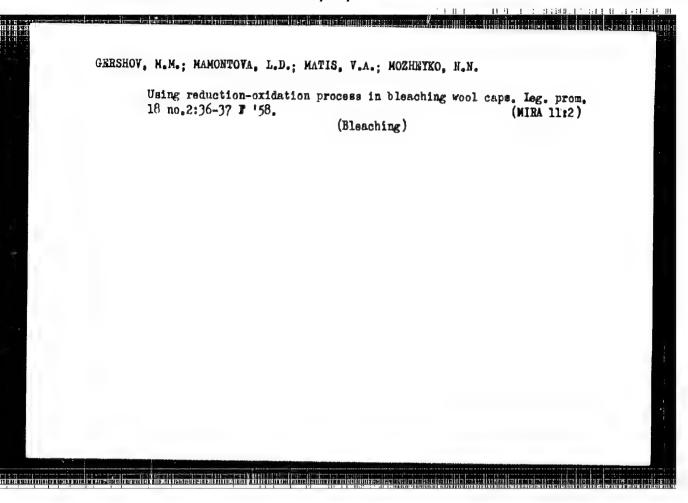


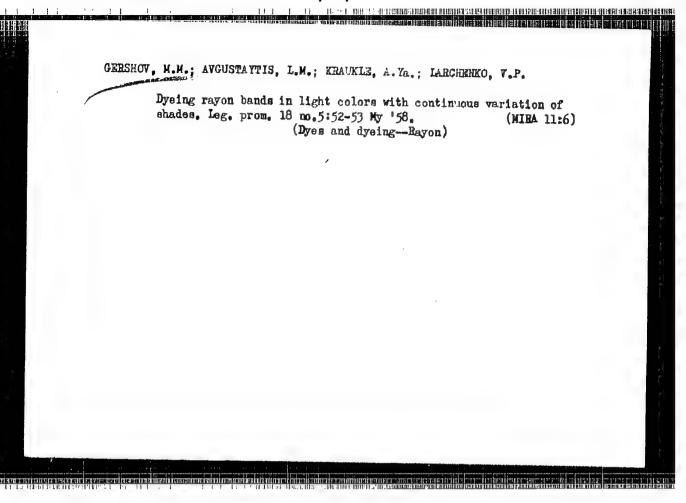


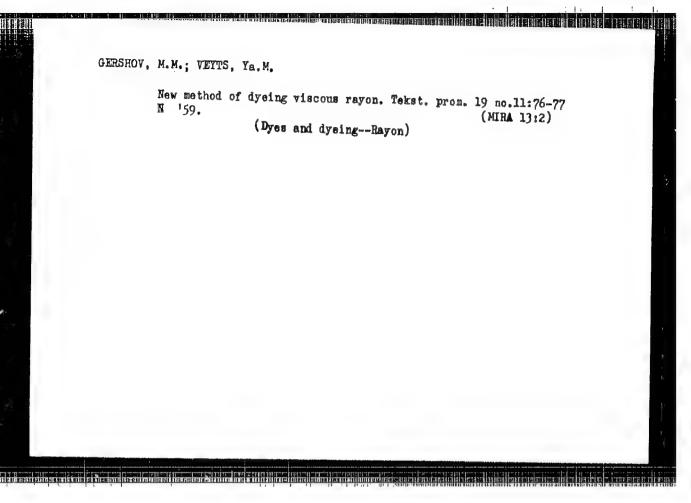


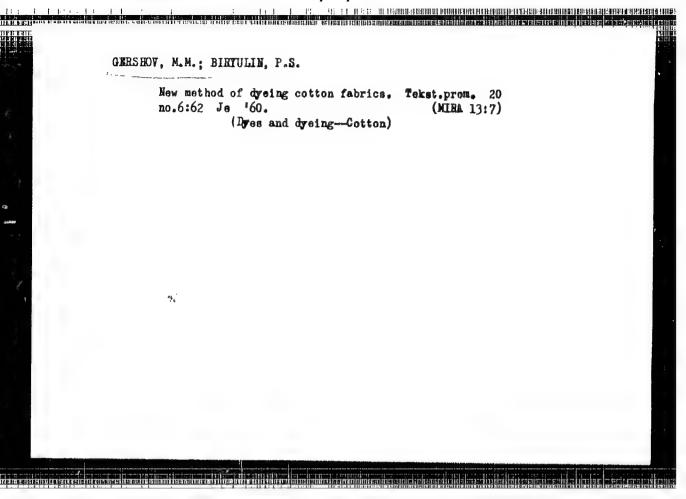


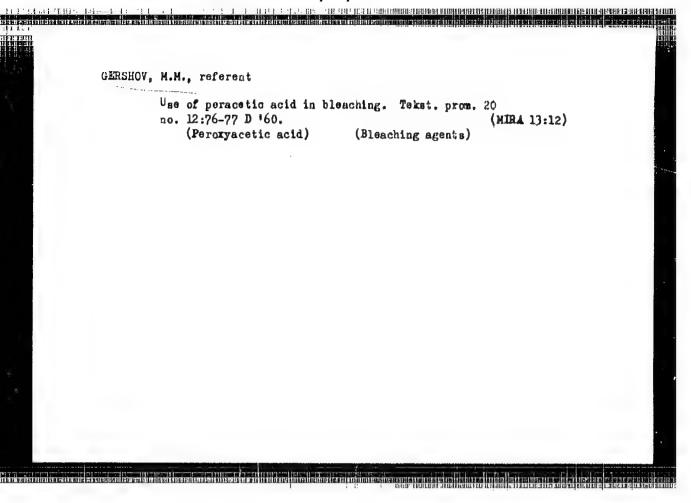


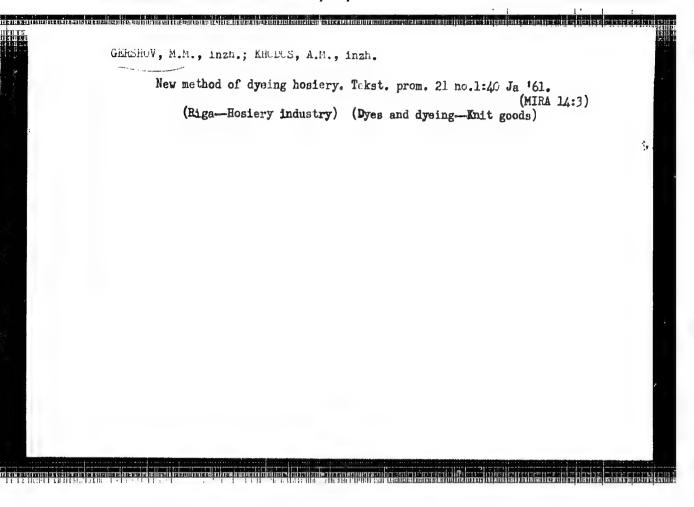


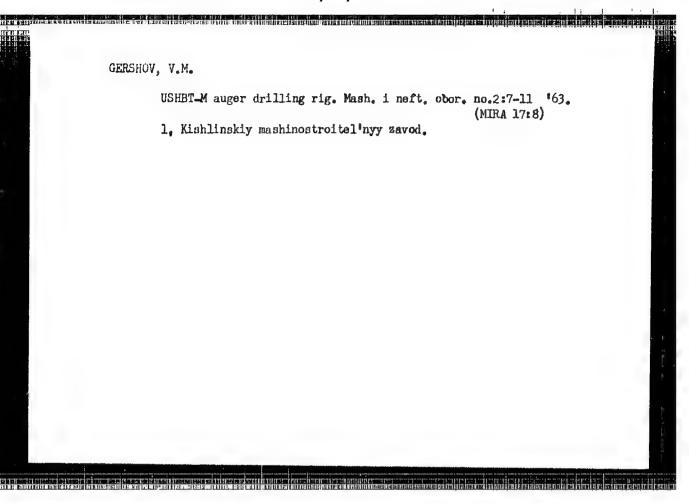


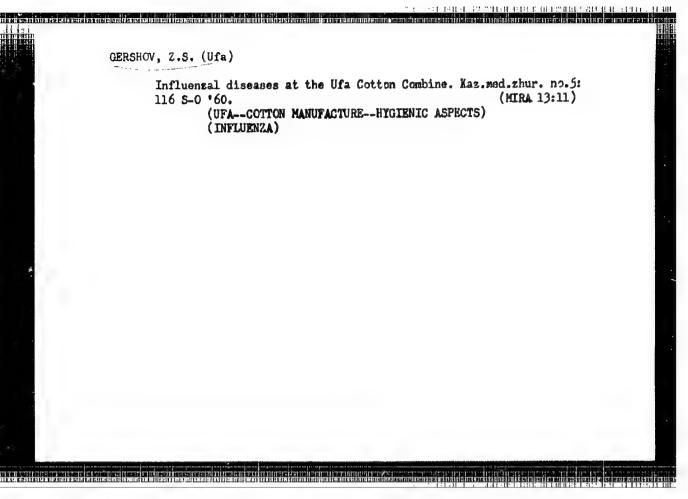










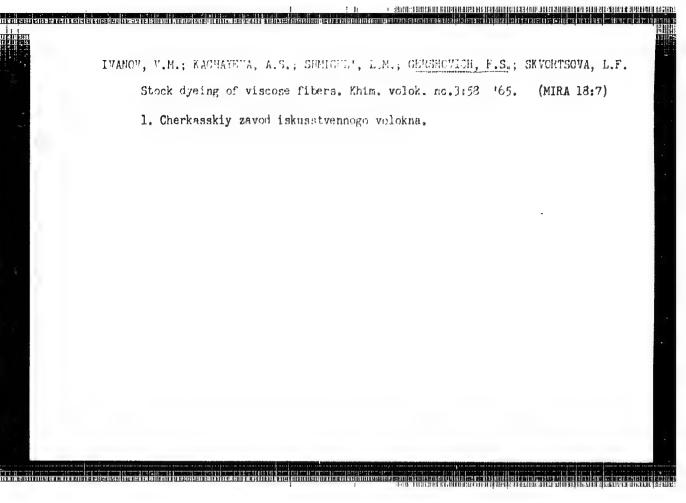


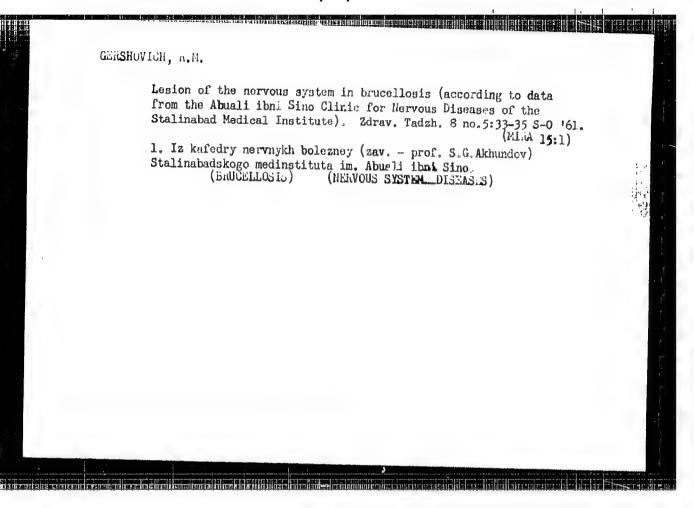
KHOVANSKIY, A. I.; MEDVEDEVA, Ye. A., kand. med. nauk; GERSHOV, Z. S., kand. med. nauk.

Organizing measures for eliminating favus in the Bashkir A.S.S.R. Vest. derm. i ven. no.2:62-64 62. (MIRA 15:2)

1. Iz Ufimskogo nauchno-issledovatel skogo kozhno-venerologicheskogo instituta (dir. P. N. Shishkin)

(BASHKIRIA-FAVUS)





SUBJECT:

USSR/Welding

135-3-10/17

AUTHORS:

Garnik I.I. Engineer, Gershovich, S.A., Engineer, and

Protsenko V.N., Engineer.

TITLE:

Electrodes "ACK-50" of type " )-50A" for Welding Steel "HJ-2".

(Elektrody A C K-50 tipa )-50A dlya svarki stali H N-2).

PERIODICAL:

"Svarochnoye Proizvodstvo", 1957, # 3, p 22, (USSR).

ABSTRACT:

Type ">50A" electrodes are used for low-alloy construction steel. In view of acute need for such electrodes, the laboratory of the author's plant has developed a new electrode coat-

for welding steel " $H\bar{J}_{-2}$ ".

The recipe for the coating of "CM-11" electrodes which are not applicable for welding steel "H $\Omega$ -2"(give pores, vertical and overhead welding is impossible) was used as the initial basis.

The coating for electrode type ">-50A" of grade "ACK-50", applicable for use with a.c. and d.c. (with reverse polarity) was created as a result of the latest work. The recipes of coatings "CM-11" and "ACK-50" are as specified below(in % of weight):

Card 1/4

TLE:	Electrodes "ACK-50" of type " > 50A" in (Elektrody ACK-50 tipe > 50A dlya sy	or Welding	35-3-10/1? Stoel "H <b>A</b> -2".	
	o year and a second a second and a second a second and a second a second and a second a second and a second a second and a second and a	М-11	K-50	
	Marble	28.2	26.4	
	Feldspar,	20.3	19.2	
	Sodium silicate	-	3.8	
	Ferrosilicon	8.5	9.0	
	Ferromanganese	3.5	3.3	
	Powdered iron	32.8	31.0	
	Powdered aluminum	•	1.0	
	Titanium dioxide	3.5	3.3	
	Cellulose	1.9	1.8	
	Potash	1.3	1.2	
	Liquid glass of 1.40 - 1.44 density, - the potassium liquid glass 75 %, the sodium liquid glass 25 % (of dry compound weight)	22-24	22-24	
	The thickness of coating recommended:			
rd 2/4				

TITLE:	135-3-10/1? Electrodes "A(K-50" of type " >50A" for Welding Steel "HA-2". (Elektrody A(K-50 tipa )50A dlya svarki stali HA-2).				
	Diameter of the rod in mm	Diameter of the electrode in mm.	The maximum allowable difference in coating thickness, in mm		
	4 5	6.25-6.35 7.35-7.50	0.10 0.15		
	The resulting maches	8.35-8.50	0.15		
	metal: resistance l: welded joint: resistance l: impact resistance l: in all space position fusion is quiet; the		e average) are: in weld elongation 28 %; in ngle of bend 180°, as are burning evenly ternating current; the ed the slag covers the		

135-3-10/17

TITLE:

Electrodes "A(K-50" of type " ) 50A" for Welding Steel " HN-2". (Elektrody A(K-50 tipe ) 50A dlya svarki stali HN-2).

responding to type " 3.50A" by the standard "#072523-51", destined for welding heavy duty structures of steel "H/l-2".

The electrodes under consideration are widely applied, also at the plant "imeni Molotov" in Dnepropetrovsk which produces steel structures for the combined metallurgical works under construction in India, and at the plant "imeni Pravda" in Dneprodzherzhinsk for construction of corn harvesters.

The article contains 3 tables.

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ASSOCIATION: Dnyepropetrovsk Electrode Plant.

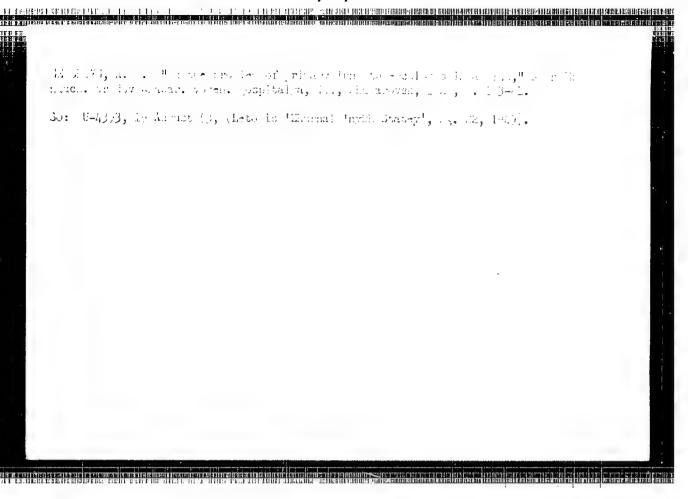
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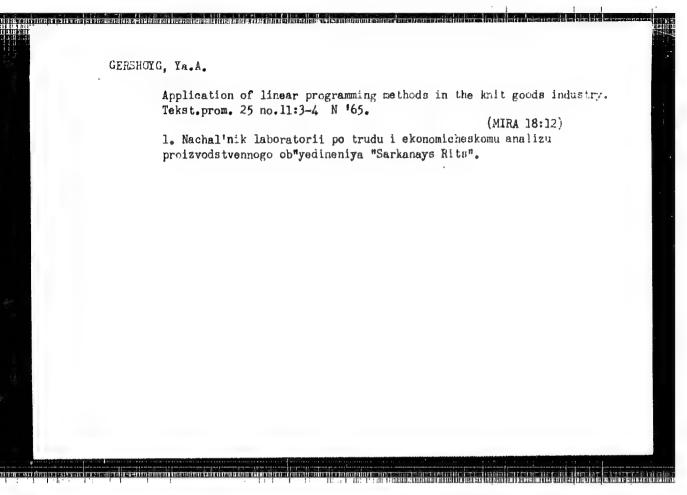
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AVAILABLE: At the Library of Congress.

Card 4/4

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007/113-58-4-9/21 Popov, V.A., Candidate of Technical Sciences, Yuznetsova, AUTHORS: T.A., Khoroshkov, D.Ye., Gershoyg, Ya.I. Cold Fressing of Electrodes (Pholodnoye vydavlivaniye elek-TITLE: trodov) PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 4, pp 26-27 (USSR) The technological processes involved in the manufacture of ABSTRACT: copper or copperalloy electrodes of various dimensions (Figure 1) used for spot welding in the automobile industry wasted up to 55 % of the metal. NIITAvtoprom together with the Moscow Midget Car Flant have worked out and introduced into the production process a wasteless technology of cold pressing of electrodes on the hydraulic 25-ton P-462 press of the Chkalovskiy Zavod "Metallist" (Chkalov "Metallist" Plant) with its low hydraulic extractor. This method is based on tests of the Gor'kovskiy avtozavod (Gor'kiy Automobile Plant). The designs of the press (Figure 2), punch (Figure 3) and the adapter pieces (Figure 4) are described and discussed. The cold-pressed and sharpened electrodes Card 1/2 are shown on figure 5. In addition to the economy of ma-

Cold Pressing of Electrodes

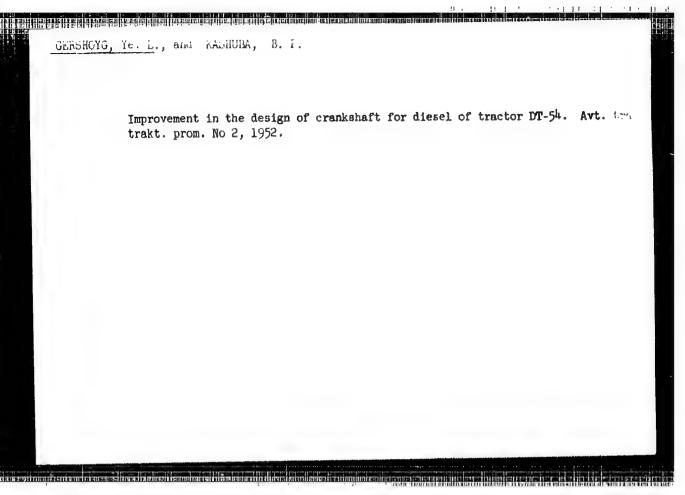
307/113-58-4-9/21

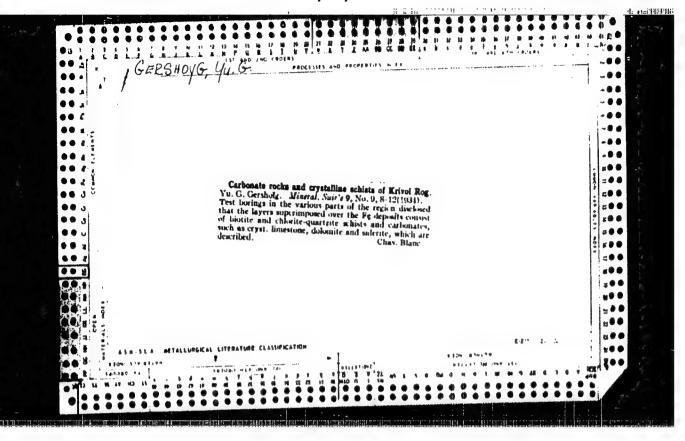
terial, the work expenditure is decreased by 3 times by the new process. It is suggested that one automobile plant establish a department for the manufacture of electrodes for spot welding by the new method and serve the entire economic district. There are 4 diagrams and 1 photo.

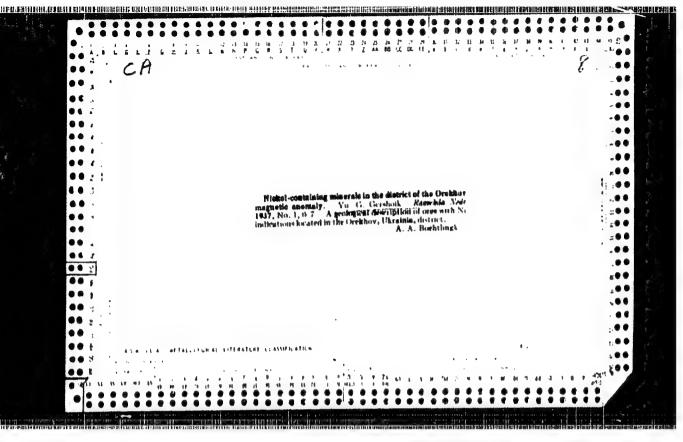
ASSOCIATION: MIITavtoprom and Moskovskiy zavod malolitrazhnykh avtomobiley (The Moscow Midget Car Plant)

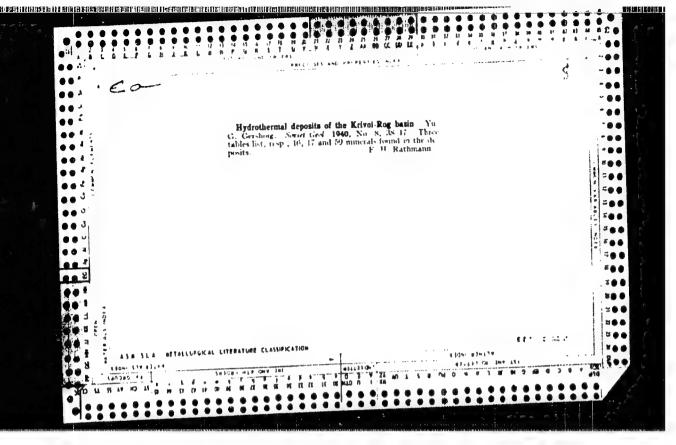
- 1. Welding rods--Production 2. Hydraulic presses--Equipment
- 3. Hydraulic presses -- Performance

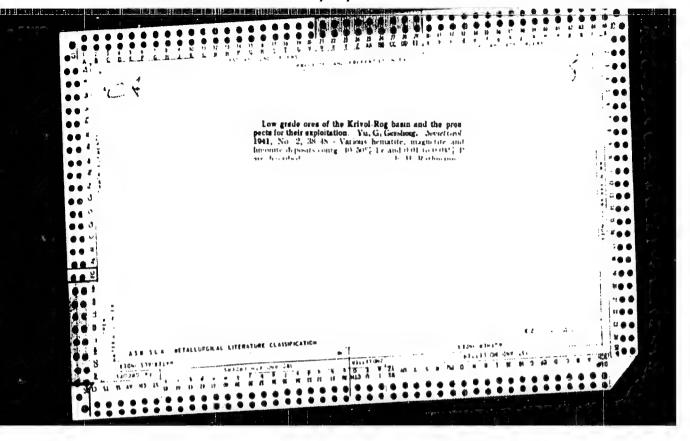
Card 2/2

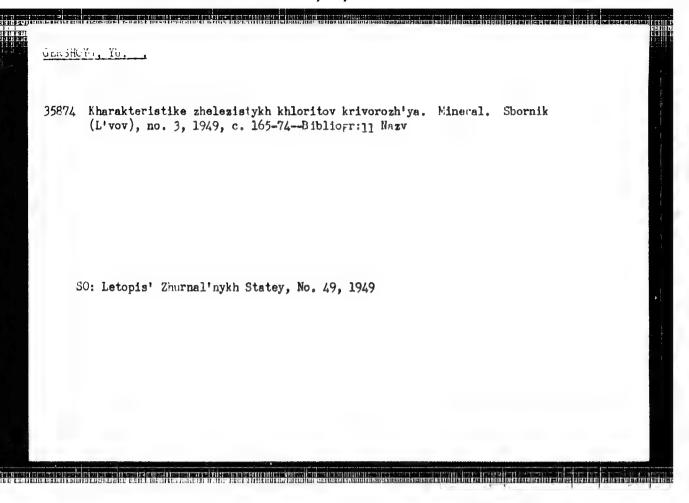


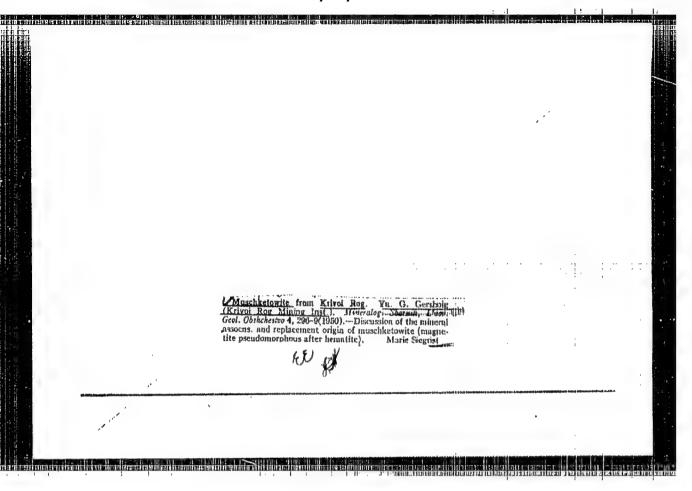


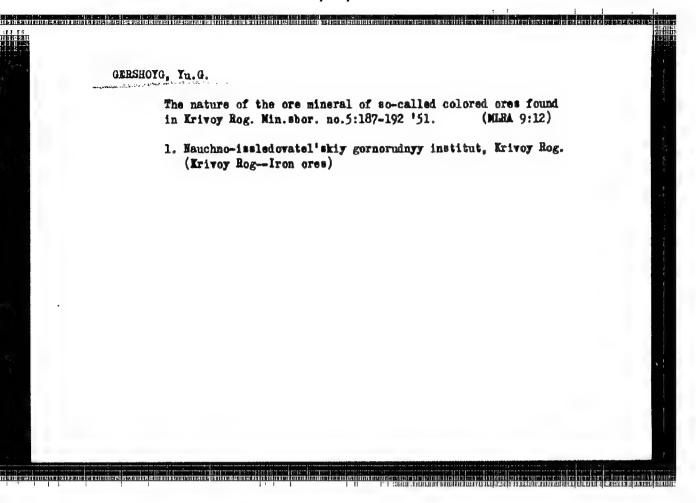


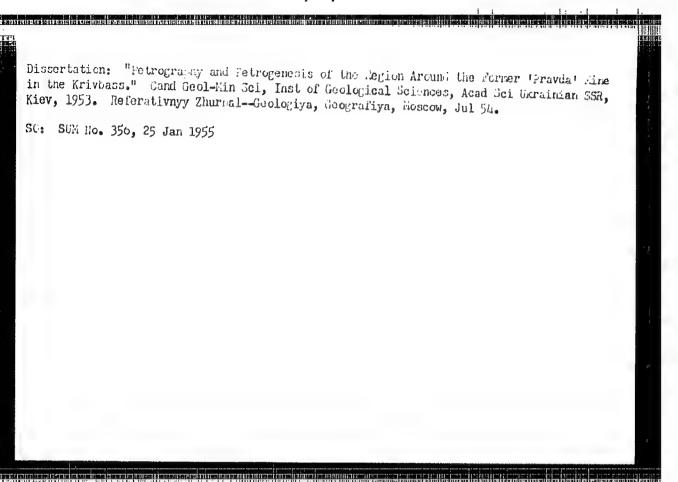


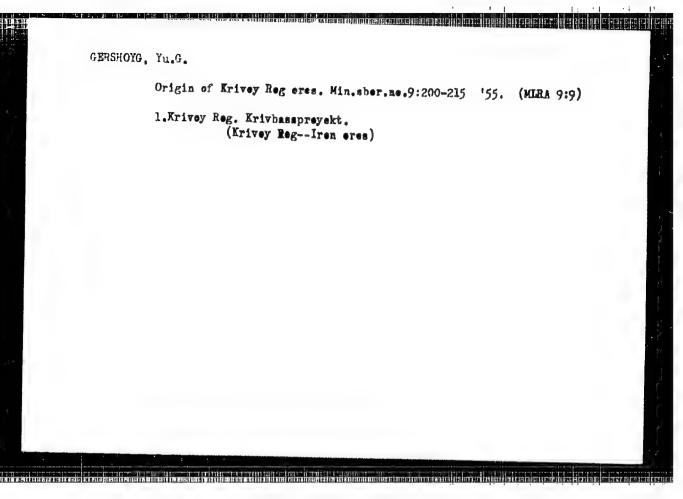










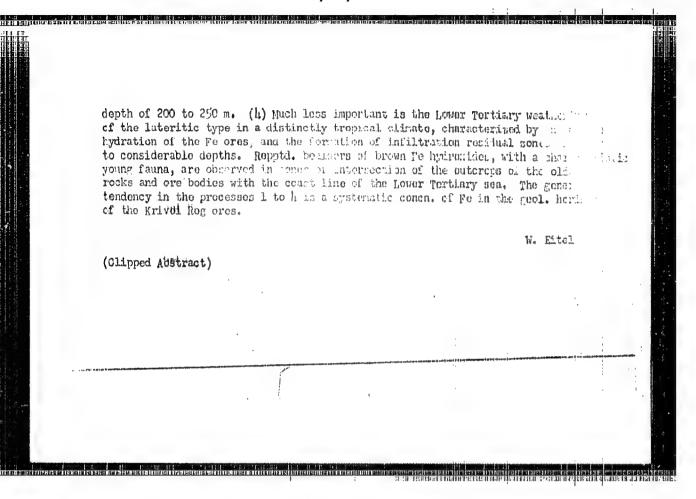


# "APPROVED FOR RELEASE: 09/24/2001

# CIA-RDP86-00513R000514920007-3

Generis of the Krivoi Rog ores. Pt. Gersnoi. Dokaldy Mad. Nank S.S.S. 102, 1189-91 (1955). — The ore formation of Krivoi Rog is particularly complete pokaldy Mad. Yank S.S.S.I. of the superposition of tectonic and magnatic cycles, with much variable metant.

hydrothermal, and diagenetic processes. hydrothermal, and diagenetic processes. G. distinguishes the following phases of the (1) Ppth. of thin lawers of the sillicate sediments mixed with the form droxide, siderite, and chamosite mineral, intermittent with namely layers. tions are observed for a motasomatic replacement of nenore ninerals by an Fe metasomatic (2) The richest Fe ores (of the Saksagansk type) show the marks of a kydrothermal metamorphis in a not-better-characterized magnatic cycle; they are formed at elev temps, and pressures from not solns, circulating in the Fe sillicate rocks. The reof the silica material is accompanied by a change of siderite to magnetite which is locally enriched to more or less dense, or coarsely cryst., ore oddies, with interlayore of piotite, muscovite, amphiboles, chloritoid, aluite, and-alumite, tourmaline, noisite, apatite, etc. Much older quart, veins are changed to magnetite-martite ores. Local alk. and carbonate metasomatims are observed, indicated by the recompra of the Fe silicate ores and the ppth. Of Fe hydroxidos, or the formation of a particular dolonitemagnetite ore. (3) The most important gool. process was the post-proterozoic westhering of the older ores in a cold climate, characterized by an extensive oxidation of magnetite to martite, of the Pe silicate ores to "kraska", i.e. ahighly dispersed with. of hematite and city. Quarts is intensively leached from the earlier hypogene cre zones. The weathering goes in the mon menser cros of the ingulatsk type nown to a



#### CIA-RDP86-00513R000514920007-3 "APPROVED FOR RELEASE: 09/24/2001

15-57-5-6873

Translation from: Referativnyy zhurnal, Geologiya, 1957, Mr 5,

pp 84-85 (USSR)

AUTHOR:

Gershoyg, Yu. G.

TITLE:

The Mineral-Forming Processes in the Primary-Sedimentary Rich Iron Ores of Krivoy Rog (Protsessy mineraloobrazovaniya v pervichno-osadochnykh bogatykh zheleznykh

rudakh Krivogo Roja)

PERTODICAL:

Vopr. mineralogii, osadoch. obrazovaniy. Kn 3-4, L'vov.

L'vovsk. in-t, 1956, pp 160-173.

APSTRACT:

The Krivoy Rog ore deposits are characterized by con-

siderable variety in the conditions of formation,

morphology, internal constitution, mineral composition, and structure, owing to the presence of ores of various origins. Epigenetic martite ores of the Saksagan' type and primary-sedimentary metamorphosed ores of the Ingulets type are distinguished. Ores of the Ingulets type are characterized by tabular deposits with a general structure of complex folds. The ores contain almost the

structure of complex folds. The ores contain almost the

Card 1/3

entire range of iron-ore minerals. A vertical zonal arrangement is present. Brown iron-ores are developed in the upper

15-57-5-6279

The Mineral-Forming Processes in the Primary-Sedimentary (Cont.)

horizons, authirenic limonite-roetnite; martite or hematite-limonite ores occur in the footwall. Martite ores are dominant below this zone. Pelow the martite ores occur magnetite ores in direct continuation. Locally, distinctive magnetite deposits occur still lower. They are very rich in carbonates (dolomite). The formation of these ores was clearly associated with intense metasomatism, which was superimposed on an earlier phase. The oldest ores of this type are magnetite ores, and all the other varieties of ore are either products of oxidation and leaching of primary ore or they developed by the same process acting on the enclosing ferruginous rocks and shales. Four stages may be distinguished in the formation and subsequent elteration of the primary-sedimentary ores. 1) Sedimentation and diagenesis. The ores were initially carbonates, with admixtures of muddy and sandy material. 2) General and hydrothermal meta-morphism, with the conversion of siderite to magnetite and iron hydroxides to hematite. Crystalloblastic growth gave rise to quartz, mica, and amphibole. 3) Profound pre-Tertiary continental weathering, resulting from artesian circulating subsurface waters in complexly Card 2/3

The Mineral-Forming Processes in the Primary-Sedimentary (Cont.)

deformed formations. This process produced oxidation of magnetite, decomposition of ferruginous slicates, and the formation of argillaceous red iron ores. Minerals of pre-Tertiary weathering were mertite, hydrates of iron oxides, and clay substances. 4) Tertiary weathering in an environment of warm and moist climate led to the formation of the goethite-hydrogoethite hydroxide series from the decomposition of silicates and carbonates. The metamorphosed ores include quartz, quartz-carbonate, and quartz-silicate vein stockworks containing sulfides, which are clearly of hydrothermal origin. Judging from the presence of pyrite, chalcopyrite, pyrrhotite, galena, arsenopyrite, and tourmeline, these veins are pneumatoaqueous fractions from acid magmas. In the last stage, associated with weathering of the laterite type, limonite, hydrogoethite, and clay substance were formed.

Card 3/3

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11-10-3/23 AUTHOR: Gershoyg, Yu.G. Processes of Iron Ore Formation and Deposits of Concentrated TITLE: Ores of the Krivoy Rog Basin (Protsessy obrazovaniya zhelezorudnoy formatsii i zalezhey bogatykh rud Krivorozhskogo basseyna) Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, PERIODICAL: # 10, p 25-38 (USSR) The processes of the forming of iron ore deposits are very com-ABSTRACT: plex and constitute an organic part of the general process of petrogenesis of the Krivoy Rog basin. Two cycles of sedimentation can be distinguished in this area: tectogenesis and metamorphosis. The accumulation of extraordinary large quantities of ferrosiliceous sediments during the Pre-Cambrian period in the Krivoy Rog and other areas of the globe may be explained by higher CO2 contents of the atmosphere and lower salinity of oceanic waters. This assumption is supported by the fact that ferrous rocks of the Krivoy Rog area contain carbon. The phosphorus content may be attributed to former organic life. The author draws attention to different conditions existing in open oceans with free circulation of water and "restricted" basins with resulting changes caused by variable p.H. concentrat-Card 1/4 

11 -10-3/23

Processes of Iron Ore Formation and Deposits of Concentrated Gres of the Krivoy Rog Basin

ions, oxygen potentials and other factors affecting colloidal and direct sedimentation of ferrous compounds. Concentrations of iron ore occured every time the basin was inundated by sea water. Rhythmic sedimentation was caused by seasonal factors forming alternately layers of magnetite and hematite in accordance with different geo-chemical processes involving colloids of Fe and Si. With regard to the general physico-geographical conditions under which the forming of iron ore deposits occur, it can be stated that "iron ore epochs", i.e. periods of principal accumulation of sedimentary iron ores are invariably associated with extensive and complex epirogenetic fluctuations and occur mainly at the beginning of intense and prolonged periods of transgression. Iron ore sedimentation at Krivoy Rog, has to be classified, according to its general characteristics, as belonging to the geosyncline type. The layers of martitic and magnetic hornstones and jaspilites formed from siderito-siliceous sediments. settled under weak reduction conditions with simultaneous shortage of active oxygen. Finally, predominantly hematitic jaspilites were formed under con-

Card 2/4

#### CIA-RDP86-00513R000514920007-3 "APPROVED FOR RELEASE: 09/24/2001

11-10-3/23

Processes of Iron Ore Formation and Deposits of Concentrated Cres of the Krivoy Rog Basin

ditions of good aeration and abundance of oxygen, i.e. they represent sediments of acidifying facies formed under conditions of shallow water. The most important stage of transformation of ferrous sediments at the forming of very large concentrations of secondary iron deposits is the general hydrothermal metamorphism, which takes place under conditions of increased temperatures and pressures. Petrogenetic studies have disclosed various stages of metamorphism as well as regressive metamorphism at the forming of Krivoy Rog deposits. During the last stages of mineralization, intensive processes of alkaline and carbonate metasomatosis took place at certain areas. The last and less important stage of transformation of iron ore formations is connected with a cycle of erosion during the Lower Tertiary period, occuring under hot and humid climatic conditions. There are 1 table, 9 photographs, and 24 references, of which

17 are Slavic (Russian)

Card 3/4

11-10-3/23

Processes of Iron Ore Formation and Deposits of Concentrated Ores of the Krivoy Rog Basin

ASSOCIATION: Institute for Mechanical Processing of Ferrous Metals,

Ministry of Ferrous Metallurgy, Krivoy Rog (Institut mekhaniche-

skoy obrabotki chernykh metallov, Ministerstva chernoy me-

tallurgii SSSR, g. Krivoy Rog)

SUBMITTED: 14 December 1956

AVAILABLE: Library of Congress

Card 4/4

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AUTHOR: Gershoyg, Yu G. SOV/7~58-6-9/16 TITLE: On the Geochemistry of Phosphorus in the Iron Ore Formation of the Krivoy Rog Basin (K geokhimii fosfora v zhelszorudnoy formatsii Krivorozhskogo basseyna) Geokhimiya, 1958, Nr 6, pp 587 - 595 (USSR) PERIODICAL: ABSTRACT : To begin with the author investigated the distribution of phosphorus in stratigraphic horizons (Table 1). The single horizons consist of thin strata. The ore bearing horizons alternate with barren ones. 70% of the phosphorus are bound in the one bearing strata. The phosphorus content depends on the precipitation conditions of the single strata. Horizons which originally consisted of leptochlorite have the highest content. In all cases phosphorus is bound to very small apatite grains, - In the following secondary alterations of the phosphorus content are dealt with: the connection with types of sinerals (Table 3), the modification by oxidation of the ores (Table 4) and the modification with depth (Table 5). Thus, the phosphorus content was reduced by hypogenic processes to half or less. Card 1/2 especially in the case of ore deposits of the Saksagauskiy 'vy

On the Geochemistry of Phosphorus in the Iron Ore Formation of the Krivoy Rog Basin

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507/7-58-6-9/16

(Sakeaganskiy tip, Table 6). The phosphorus content increases with increasing depth. The mentioned regularities may be used for the geochemical characterization of sedimentation and metamorphosis, for stratigraphic correlation and for the production of concentrates with inconsiderable phosphorus content. There are 6 tables and 25 references.

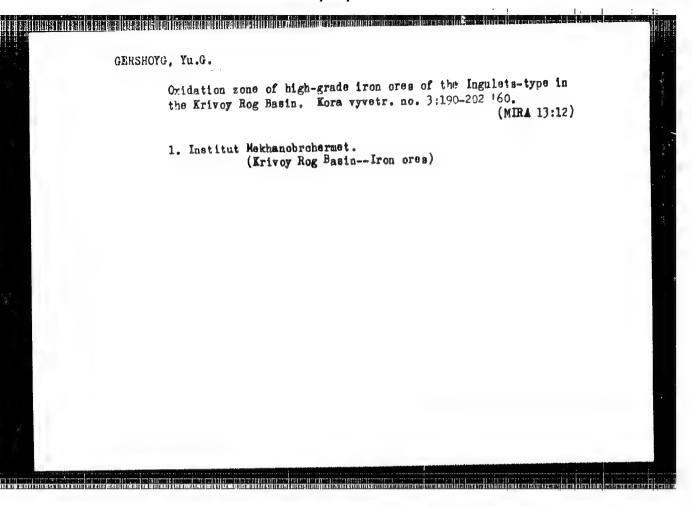
5 of which are Soviet

ASSOCIATION: Nauchno-sealedovatel skay a proyektnyy institut po

obogashcheniyu i aglomerateil rud shernykh metallov, Krivoy Bog (Schentific Research and Planning Institute for Concentration and Agglomeration of Iron Ores, Krivoy Rog)

SUBMITTED: January 26, 1958

Card 2/2

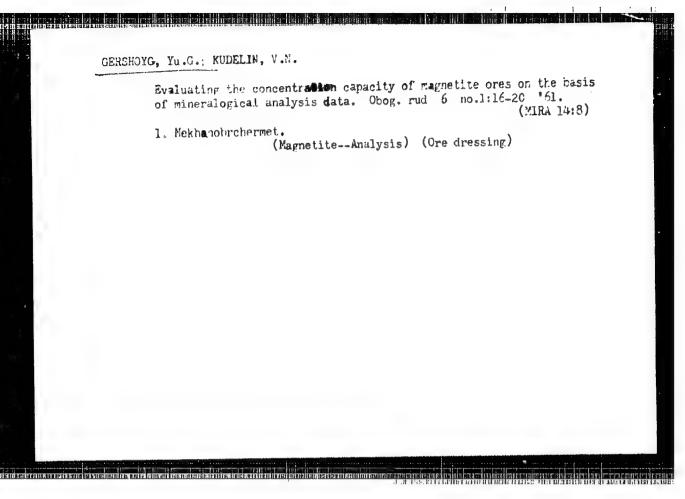


GERSHOYG, Yu.G.; DEMENT-YEVA, M.P.

Microhardness of minerals of iron ores in the Krivoy Rog Easin.

Min.sbor. no.14:256-263 ·60. (KIRA 15:2)

1. Nauchno issledovatel skiy i proyektny; institut po
obogashcheniyı i aglomeratsii rud chernykh metallov, Krivoy
Rog. (Krivoy Rog Basin --Mineralogy)



BELEVTSEV, Ya.N.; FOMENKO, V.Yu.; NOTAROV, V.D.; MOLYAYKO, G.I.;

MEL'NIK, Yu.P.; SIROSHTAN, R.I.; DOVGAN', M.N.; CHERNOVSKIY,

M.I.; SHCHERBAKOVA, K.F.; ZAGORUYKO, L.G.; COROSHNIKOV, B.I.;

AKIMENKO, N.M.; SEMERGEYEVA, Ye.A.; KUCHER, V.N.; TAKHTUYEV, G.V.;

KALYAYEV, G.I.; ZARURA, V.M.; NAZAROV, P.P.; MAKSIMOVICH, V.L.;

STRUYEVA, G.M.; KARSHENBAUM, A.P.; SKARZHINSKAYA, T.A.;

CHEREDNICHENKO, A.I.; GERSHOYG, Yu.G.; PITADE, A.A.; RADUTSKAYA,

P.D.; ZHILKINSKIY, S.I.; KAZAK, V.M.; KACHAN, V.G.; FOLOVKO,N.I.,

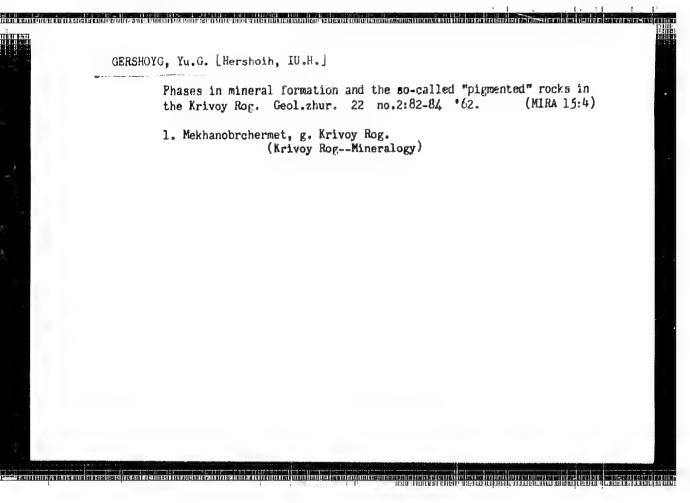
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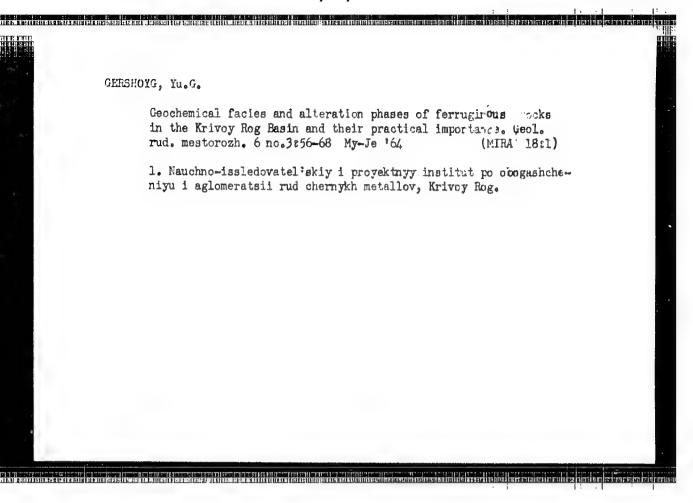
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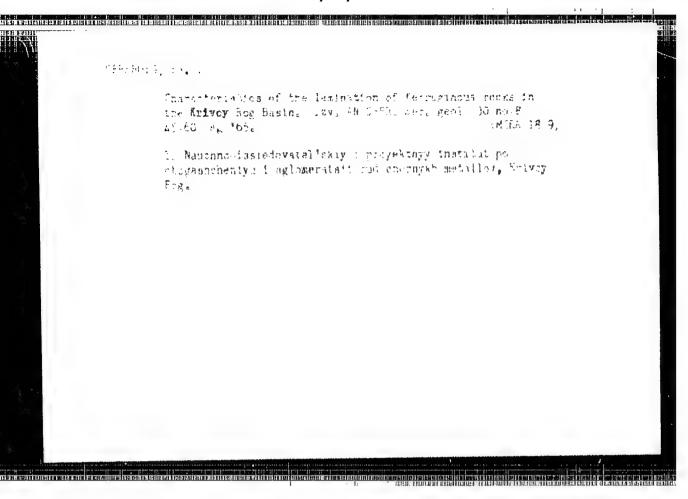
RAKHLINA, N.P., tekhn. red.; MATVEYCHUK, A.A., tekhn. red.

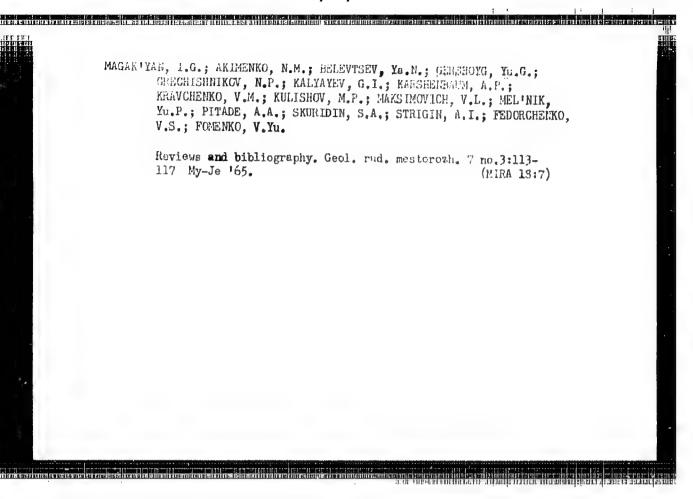
[Geology of the Krivoy Rog iron ore deposits] Geologiia Krivorozhskikh zhelezorudnykh mestorozhdenii. Kiev, Izd-vo Akad. nauk
USSR. Vol.1.[General problems of the geology of the Krivoy Rog
Basin. Geology and iron ores of the "Ingulets," Rakhmanovskiy,
and Il'ich ore deposits] Obshchie voprosy geologii Krivbassa.
Geologicheskoe stroenie i zheleznye rudy mestorozhdenii rudnikov
"Ingulets," Rakhmanovskogo i im. Il'icha. 1962. 479 p. Vol.2.[Geology and iron ores of the Dzerzhinskiy, Kirov, Liebknecht, October
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Lenin deposits]Geologicheskoe stroenie i zheleznye rudy mestorozhdenii
im. Derzhinskogo, im.Kirova, im.K.Linkenkhta, im.XI parts"ezda, im.
Krasnoi Gvardii i im.Lenina. 1962. 564 p.

(Krivey Rog Basin--Iron ores)









BUSHUYEV, V.P.; GUBIN, G.V.; GONCHARENKO, Yu.I.; KARMAZIN, V.I.;

MARGULIS, V.S.; MITROV, V.A.; NIKOLAYENKO, N.O.; BOERUSHKIN, L.G.;

BUROV, A.I.; RYBAKOV, V.N.; SOSHIN, A.F.; TATSIYENKO, P.A.;

TOVSTANOVSKIY, O.D.; YUROV, P.P.; Prinimali uchastiye:

NIFAGINA, A.A.; CHERNYY, I.I.; GERSHOYG, Yu.G.; KOSTIKOV, A.G.;

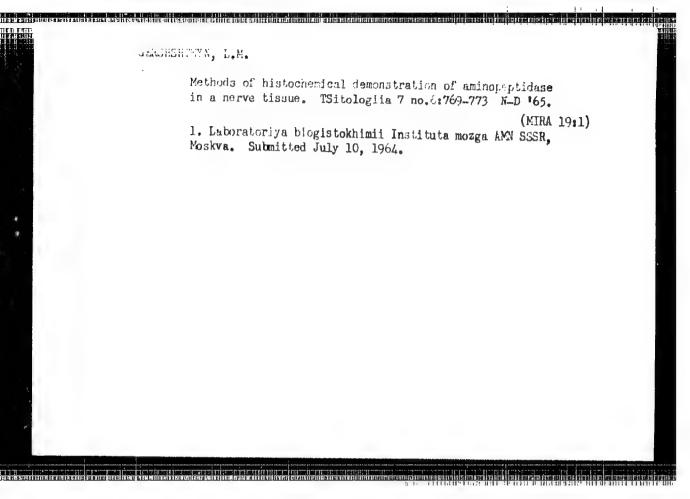
DOLGIKH, M.A.; MOWSKOVICH, S.A.; STUPIN, D.D.; NEVOYSA, G.G.

Magnetization roasting of Kerch ores in the experimental factory of Kamysh-Burun Combine. Gor. zhur. no.12:30-37 D \*162. (MIRA 15:11)

1. Institut Mekhanobrchermet, Krivoy Rog (for Bushuyev, Gubin, Goncharenko, Karmazin, Margulis, Mitrov, Nikolayenko, Nifagina, Chernyy, Gershoyg, Kostikov). 2. Kamyshburunskiy zhelezorudnyy kombinat, Kerch' (for Bobrushkin, Burov, Rybakov, Soshin, Tatsiyenko, Tovstanovskiy, Yurov, Dolgikh, M.A.; Movskovich, S.A.; Stupin, D.D.; Nevoysa).

(Kerch Peninsula—Ore dressing)

(Iron ores)



# L 10126-63

ACCESSION NR: AP3000155

5/0141/63/006/002/0311/0323

AUTHOR: Aptek, Yu. E.; Gersht, A. M.

TITLE: Wings of quasiharmonic-signal spectrum

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy, radiofizika, v. 6, no. 2, 1963,

311-323

TOPIC MAGS: quasiharmonic signal

ABSTRACT: A mathematical study of the wings is presented; the signal is amplitude- and frequency- (or phase-) modulated by mutually correlated fluctuations with wide assumptions as to the law of their distribution. Asymptotic formulae for the signal spectrum are developed. The simpler formulae given in the Sections 1 and 2 of the article are applicable to the cases when the disturbance is locally small and varies much quicker or much slower than the reciprocal of the frequency band. In other cases the formulae given in the Section 3 apply. "In conclusion the authors express their thanks to S. I. Borovitskiy for his interest in their work and his comments.

Card 1/2

L 10126-63 ACCESSION NR: AP3000155

Orig. art. has: 50 equations.

ASSOCIATION: none

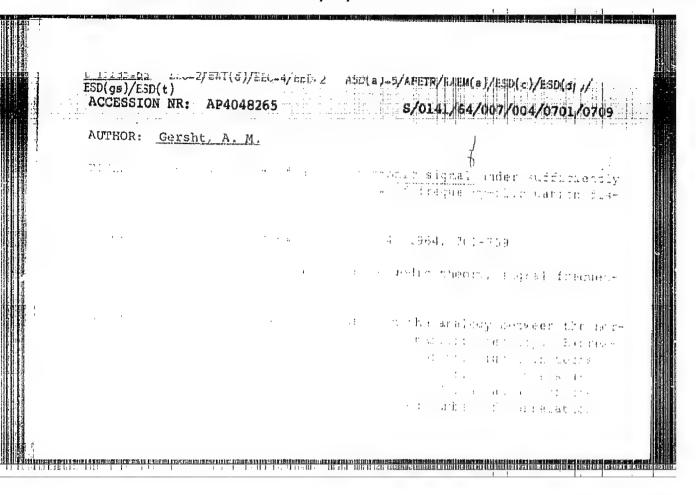
SUBMITTED: 07Apr62 DATE ACQ: 12Jun63

ENCL: 00

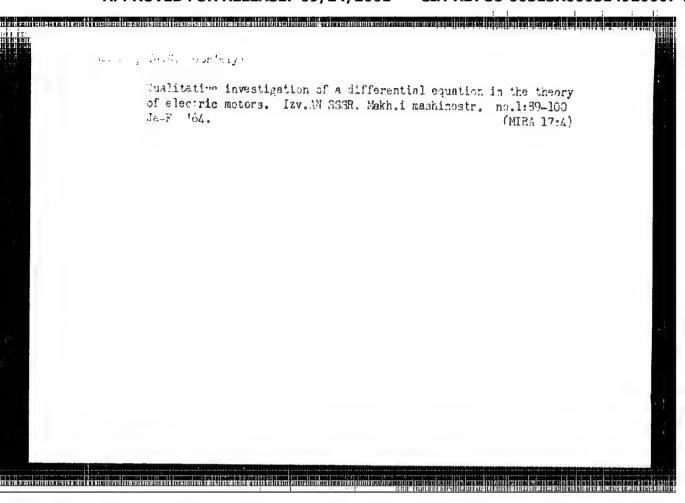
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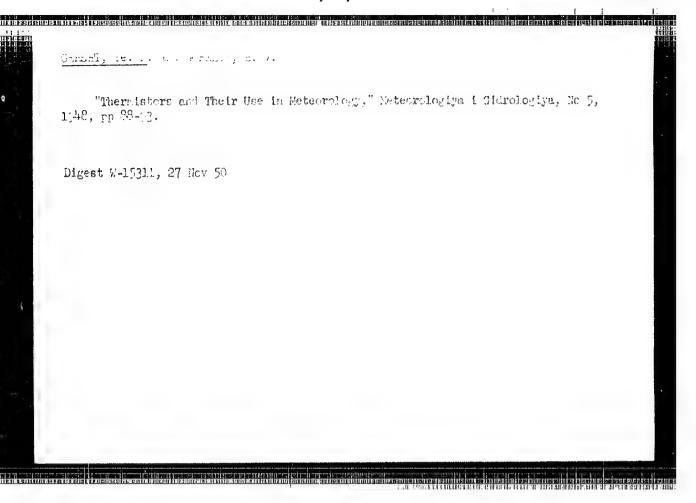
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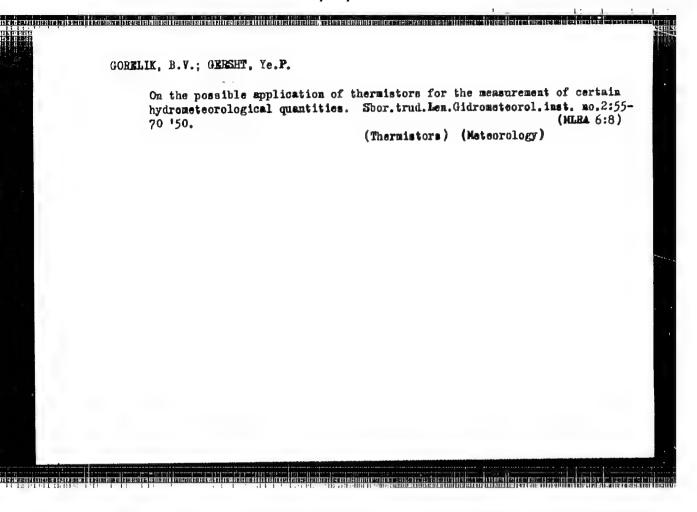
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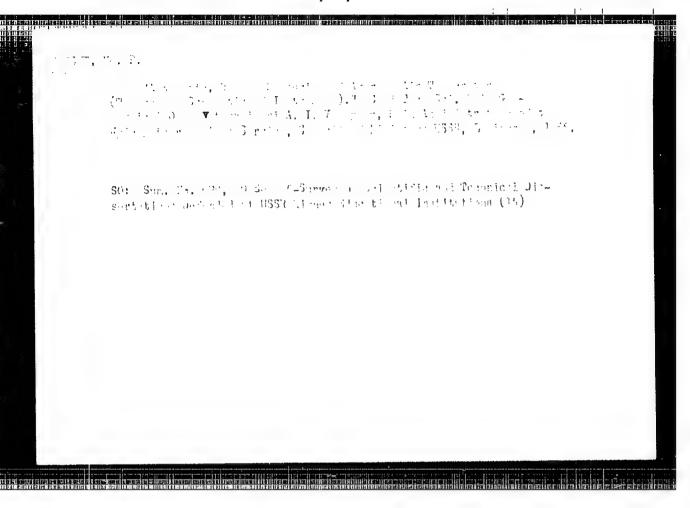


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AID P - 1977

26 N - 11 1, jein

Subject

: USSR/Meteorology and Hydrology

Card 1/1

Pub.71-a - 20/26

Author

: Gersht, E. P.

Title

: The priority of Russian scientists in designing the

telemeteorograph

AL COLLABORATE CHEMICAL COMPRESSES

Periodical: Met. i gidro., no.2, 51, 1955

Abstract

The article reports that the design of a telemeteorograph made by D. P. Yezuchevskiy was reported in the minutes of the 12th conference of the Section of Physical Science of the Naturalists and Etnographers Society in 1874. However, therdesign itself has not

yet been found.

Institution: None

Submitted

: No date

AID P - 2615

GERSHT, YE. P.

Subject

: USSR/Meteorology

Card 1/1

Pub. 71-a - 18/26

Author

: Gersht, E. P.

Title

: 60 years since the invention of radio

Periodical: Met i gidr, No.4, 53, J1/Ag 1955

Abstract

: The article commemorates 60 years since A. S. Popcy demonstrated the first radio device used to record "electric turbulence in the atmosphere" in 1895.

Institution: None

Submitted : No date

